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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,207	09/24/2004	Sung-Kyu Hong	8071-71(OPP 042213 US)	5127
22150	7590	03/23/2006	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			DUONG, TAI V	
			ART UNIT	PAPER NUMBER
			2871	
DATE MAILED: 03/23/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/509,207	HONG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tai Duong	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 4,6-8 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**JAMES DUDEK**  
**PRIMARY EXAMINER**

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/08/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

Art Unit: 2871

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recited feature "a subsidiary gate pad formed on the passivation layer and connected to the gate pad through a contact hole; and a subsidiary data pad formed on the passivation layer and connected to the data pad through a contact hole" of claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2871

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakamoto et al (US 6,650,390).

Note Figs. 4-6 which identically disclose the claimed liquid crystal display comprising an electrically floating pixel electrode 424 formed in the pixel area, electrically insulated from the direction control electrode 421 connected to the thin film transistor, and having a cutout proceeding along the direction control electrode; a second insulating substrate 431 facing the first insulating substrate 411; a common electrode 432 formed on the second insulating substrate; and a liquid crystal layer having negative dielectric anisotropy interposed between the first substrate and the second insulating substrate. See the remaining of the recited features in column 6, line 25 – column 7, line 67.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al (US 6,650,390) in view of Suzuki et al (US 6,407,791).

Art Unit: 2871

Claims 2 and 12 additionally recite a storage electrode wire intersecting the data wire and forming a storage capacitor in association with the pixel electrode. Suzuki et al disclose in Fig. 8 that it was known to form a storage electrode wire 72 intersecting the data wire 56 and forming a storage capacitor in association with the pixel electrode. Thus, it would have been obvious to a person of ordinary skill in the art in view of Suzuki et al to employ in the LCD of Sakamoto et al for increasing the dielectric relaxation time of the liquid crystal. As to claim 11, it would have been obvious to employ a liquid crystal layer having positive dielectric anisotropy and liquid crystal molecules in the liquid crystal layer being aligned parallel to the first and the second substrates for obtaining a LCD with low operating voltage.

Claims 4, 6-8 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4,6-8 and 13 are allowed over the prior art of record because none of the prior art discloses or suggests a TFT array or a LCD having structure as recited in claim 3 or 9 in combination with the particular structure of the gate and data pads, the subsidiary gate and data pads, the data-line semiconductor, the direction control electrode semiconductor, the metallic piece, and the particular expression of  $V_{pc}$ , as recited in the claims.

Art Unit: 2871

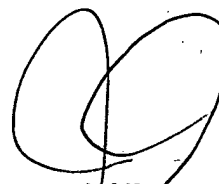
Any inquiry concerning this communication should be directed to Tai Duong at telephone number (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

TD

TVD

03/06

  
JAMES D. SMITH  
PRIMA